1600

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RAW SEQUENCE LISTING                      DATE: 05/20/2003
PATENT APPLICATION:  US/09/848,909A       TIME: 17:26:37

Input Set : A:\00742.060002.SEQLIST.TXT
Output Set: N:\CRF4\05202003\I848909A.raw
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p.6

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 4 <110> APPLICANT: Collier, R. John
 5        Sellman, Brett R.
 7 <120> TITLE OF INVENTION: Compounds and Methods for the Treatment
 8        and Prevention of Bacterial Infection
11 <130> FILE REFERENCE: 00742/060002
13 <140> CURRENT APPLICATION NUMBER: US 09/848,909A
14 <141> CURRENT FILING DATE: 2001-05-04
16 <150> PRIOR APPLICATION NUMBER: US 60/201,800
17 <151> PRIOR FILING DATE: 2000-05-04
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21 <170> SOFTWARE: FastSEQ for Windows Version 4.0
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25 <212> TYPE: PRT
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31 Gln Gly Leu Leu Gly Tyr Tyr Phe Ser Asp Leu Asn Phe Gln Ala Pro
32             20                  25                  30
33 Met Val Val Thr Ser Ser Thr Thr Gly Asp Leu Ser Ile Pro Ser Ser
34         35                  40                  45
35 Glu Leu Glu Asn Ile Pro Ser Glu Asn Gln Tyr Phe Gln Ser Ala Ile
36      50                  55                  60
37 Trp Ser Gly Phe Ile Lys Val Lys Lys Ser Asp Glu Tyr Thr Phe Ala
38 65                  70                  75                  80
39 Thr Ser Ala Asp Asn His Val Thr Met Trp Val Asp Asp Gln Glu Val
40             85                  90                  95
41 Ile Asn Lys Ala Ser Asn Ser Asn Lys Ile Arg Leu Glu Lys Gly Arg
42             100                 105                 110
43 Leu Tyr Gln Ile Lys Ile Gln Tyr Gln Arg Glu Asn Pro Thr Glu Lys
44          115                 120                 125
45 Gly Leu Asp Phe Lys Leu Tyr Trp Thr Asp Ser Gln Asn Lys Lys Glu
46      130                 135                 140
47 Val Ile Ser Ser Asp Asn Leu Gln Leu Pro Glu Leu Lys Gln Lys Ser
48 145                 150                 155                 160
49 Ser Asn Ser Arg Lys Lys Arg Ser Thr Ser Ala Gly Pro Thr Val Pro
50             165                 170                 175
51 Asp Arg Asp Asn Asp Gly Ile Pro Asp Ser Leu Glu Val Glu Gly Tyr
52             180                 185                 190
53 Thr Val Asp Val Lys Asn Lys Arg Thr Phe Leu Ser Pro Trp Ile Ser
54          195                 200                 205
55 Asn Ile His Glu Lys Lys Gly Leu Thr Lys Tyr Lys Ser Ser Pro Glu
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RAW SEQUENCE LISTING   DATE: 05/20/2003
PATENT APPLICATION: US/09/848,909A   TIME: 17:26:37

Input Set : A:\00742.060002.SEQLIST.TXT
Output Set: N:\CRF4\05202003\I848909A.raw

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56      210                   215                   220
57 Lys Trp Ser Thr Ala Ser Asp Pro Tyr Ser Asp Phe Glu Lys Val Thr
58 225                   230                   235                   240
59 Gly Arg Ile Asp Lys Asn Val Ser Pro Glu Ala Arg His Pro Leu Val
60                   245                   250                   255
61 Ala Ala Tyr Pro Ile Val His Val Asp Met Glu Asn Ile Ile Leu Ser
62                   260                   265                   270
63 Lys Asn Glu Asp Gln Ser Thr Gln Asn Thr Asp Ser Glu Thr Arg Thr
64          275                   280                   285
65 Ile Ser Lys Asn Thr Ser Thr Ser Arg Thr His Thr Ser Glu Val His
66          290                   295                   300
67 Gly Asn Ala Glu Val His Ala Ser Phe Phe Asp Ile Gly Gly Ser Val
68 305                   310                   315                   320
69 Ser Ala Gly Phe Ser Asn Ser Asn Ser Ser Thr Val Ala Ile Asp His
70                   325                   330                   335
71 Ser Leu Ser Leu Ala Gly Glu Arg Thr Trp Ala Glu Thr Met Gly Leu
72                   340                   345                   350
73 Asn Thr Ala Asp Thr Ala Arg Leu Asn Ala Asn Ile Arg Tyr Val Asn
74          355                   360                   365
75 Thr Gly Thr Ala Pro Ile Tyr Asn Val Leu Pro Thr Thr Ser Leu Val
76          370                   375                   380
77 Leu Gly Lys Asn Gln Thr Leu Ala Thr Ile Lys Ala Ala Glu Asn Gln
78 385                   390                   395                   400
79 Leu Ser Gln Ile Leu Ala Pro Asn Asn Tyr Tyr Pro Ser Lys Asn Leu
80                   405                   410                   415
81 Ala Pro Ile Ala Leu Asn Ala Gln Asp Asp Phe Ser Ser Thr Pro Ile
82                   420                   425                   430
83 Thr Met Asn Tyr Asn Gln Phe Leu Glu Leu Glu Lys Thr Lys Gln Leu
84          435                   440                   445
85 Arg Leu Asp Thr Asp Gln Val Tyr Gly Asn Ile Ala Thr Tyr Asn Phe
86          450                   455                   460
87 Glu Asn Gly Arg Val Arg Val Asp Thr Gly Ser Asn Trp Ser Glu Val
88 465               470                   475                   480
89 Leu Pro Gln Ile Gln Glu Thr Thr Ala Arg Ile Ile Phe Asn Gly Lys
90                   485                   490                   495
91 Asp Leu Asn Leu Val Glu Arg Arg Ile Ala Ala Val Asn Pro Ser Asp
92                   500                   505                   510
93 Pro Leu Glu Thr Thr Lys Pro Asp Met Thr Leu Lys Glu Ala Leu Lys
94          515                   520                   525
95 Ile Ala Phe Gly Phe Asn Glu Pro Asn Gly Asn Leu Gln Tyr Gln Gly
96          530                   535                   540
97 Lys Asp Ile Thr Glu Phe Asp Phe Asn Phe Asp Gln Gln Thr Ser Gln
98 545                   550                   555                   560
99 Asn Ile Lys Asn Gln Leu Ala Glu Leu Asn Ala Thr Asn Ile Tyr Thr
100                   565                   570                   575
101 Val Leu Asp Lys Ile Lys Leu Asn Ala Lys Met Asn Ile Leu Ile Arg
102          580                   585                   590
103 Asp Lys Arg Phe His Tyr Asp Arg Asn Asn Ile Ala Val Gly Ala Asp
104          595                   600                   605
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RAW SEQUENCE LISTING   DATE: 05/20/2003
PATENT APPLICATION: **US/09/848,909A**   TIME: 17:26:37

Input Set : **A:\00742.060002.SEQLIST.TXT**
Output Set: **N:\CRF4\05202003\I848909A.raw**

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106     610             615             620
107 Glu Gly Leu Leu Leu Asn Ile Asp Lys Asp Ile Arg Lys Ile Leu Ser
108 625             630             635             640
109 Gly Tyr Ile Val Glu Ile Glu Asp Thr Glu Gly Leu Lys Glu Val Ile
110             645             650             655
111 Asn Asp Arg Tyr Asp Met Leu Asn Ile Ser Ser Leu Arg Gln Asp Gly
112         660             665             670
113 Lys Thr Phe Ile Asp Phe Lys Lys Tyr Asn Asp Lys Leu Pro Leu Tyr
114         675             680             685
115 Ile Ser Asn Pro Asn Tyr Lys Val Asn Val Tyr Ala Val Thr Lys Glu
116     690             695             700
117 Asn Thr Ile Ile Asn Pro Ser Glu Asn Gly Asp Thr Ser Thr Asn Gly
118 705             710             715             720
119 Ile Lys Lys Ile Leu Ile Phe Ser Lys Lys Gly Tyr Glu Ile Gly
120             725             730             735
123 <210> SEQ ID NO: 2
124 <211> LENGTH: 735
125 <212> TYPE: PRT
126 <213> ORGANISM: Bacillus anthracis
128 <400> SEQUENCE: 2
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130   1             5             10             15
131 Gln Gly Leu Leu Gly Tyr Tyr Phe Ser Asp Leu Asn Phe Gln Ala Pro
132             20             25             30
133 Met Val Val Thr Ser Ser Thr Thr Gly Asp Leu Ser Ile Pro Ser Ser
134             35             40             45
135 Glu Leu Glu Asn Ile Pro Ser Glu Asn Gln Tyr Phe Gln Ser Ala Ile
136     50             55             60
137 Trp Ser Gly Phe Ile Lys Val Lys Lys Ser Asp Glu Tyr Thr Phe Ala
138 65             70             75             80
139 Thr Ser Ala Asp Asn His Val Thr Met Trp Val Asp Asp Gln Glu Val
140             85             90             95
141 Ile Asn Lys Ala Ser Asn Ser Asn Lys Ile Arg Leu Glu Lys Gly Arg
142             100             105             110
143 Leu Tyr Gln Ile Lys Ile Gln Tyr Gln Arg Glu Asn Pro Thr Glu Lys
144         115             120             125
145 Gly Leu Asp Phe Lys Leu Tyr Trp Thr Asp Ser Gln Asn Lys Lys Glu
146     130             135             140
147 Val Ile Ser Ser Asp Asn Leu Gln Leu Pro Glu Leu Lys Gln Lys Ser
148 145             150             155             160
149 Ser Asn Ser Arg Lys Lys Arg Ser Thr Ser Ala Gly Pro Thr Val Pro
150             165             170             175
151 Asp Arg Asp Asn Asp Gly Ile Pro Asp Ser Leu Glu Val Glu Gly Tyr
152             180             185             190
153 Thr Val Asp Val Lys Asn Lys Arg Thr Phe Leu Ser Pro Trp Ile Ser
154         195             200             205
155 Asn Ile His Glu Lys Lys Gly Leu Thr Lys Tyr Lys Ser Ser Pro Glu
156     210             215             220
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RAW SEQUENCE LISTING   DATE: 05/20/2003
PATENT APPLICATION: US/09/848,909A   TIME: 17:26:37

Input Set : A:\00742.060002.SEQLIST.TXT
Output Set: N:\CRF4\05202003\I848909A.raw

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157 Lys Trp Ser Thr Ala Ser Asp Pro Tyr Ser Asp Phe Glu Lys Val Thr
158 225                     230                 235                 240
159 Gly Arg Ile Asp Lys Asn Val Ser Pro Glu Ala Arg His Pro Leu Val
160                     245                 250                 255
161 Ala Ala Tyr Pro Ile Val His Val Asp Met Glu Asn Ile Ile Leu Ser
162                 260                 265                 270
163 Lys Asn Glu Asp Gln Ser Thr Gln Asn Thr Asp Ser Glu Thr Arg Thr
164         275                 280                 285
165 Ile Ser Lys Asn Thr Ser Thr Ser Arg Thr His Thr Ser Glu Val His
166         290                 295                 300
167 Gly Asn Ala Glu Val His Ala Ser Phe Phe Asp Ile Gly Gly Ser Val
168 305                     310                 315                 320
169 Ser Ala Gly Phe Ser Asn Ser Asn Ser Ser Thr Val Ala Ile Asp His
170                 325                 330                 335
171 Ser Leu Ser Leu Ala Gly Glu Arg Thr Trp Ala Glu Thr Met Gly Leu
172                 340                 345                 350
173 Asn Thr Ala Asp Thr Ala Arg Leu Asn Ala Asn Ile Arg Tyr Val Asn
174         355                 360                 365
175 Thr Gly Thr Ala Pro Ile Tyr Asn Val Leu Pro Thr Thr Ser Leu Val
176     370                 375                 380
177 Leu Gly Lys Asn Gln Thr Leu Ala Thr Ile Lys Ala Asp Glu Asn Gln
178 385                     390                 395                 400
179 Leu Ser Gln Ile Leu Ala Pro Asn Asn Tyr Tyr Pro Ser Lys Asn Leu
180                 405                 410                 415
181 Ala Pro Ile Ala Leu Asn Ala Gln Asp Asp Phe Ser Ser Thr Pro Ile
182             420                 425                 430
183 Thr Met Asn Tyr Asn Gln Phe Leu Glu Leu Glu Lys Thr Lys Gln Leu
184         435                 440                 445
185 Arg Leu Asp Thr Asp Gln Val Tyr Gly Asn Ile Ala Thr Tyr Asn Phe
186     450                 455                 460
187 Glu Asn Gly Arg Val Arg Val Asp Thr Gly Ser Asn Trp Ser Glu Val
188 465             470                 475                 480
189 Leu Pro Gln Ile Gln Glu Thr Thr Ala Arg Ile Ile Phe Asn Gly Lys
190                 485                 490                 495
191 Asp Leu Asn Leu Val Glu Arg Arg Ile Ala Ala Val Asn Pro Ser Asp
192         500                 505                 510
193 Pro Leu Glu Thr Thr Lys Pro Asp Met Thr Leu Lys Glu Ala Leu Lys
194         515                 520                 525
195 Ile Ala Phe Gly Phe Asn Glu Pro Asn Gly Asn Leu Gln Tyr Gln Gly
196     530                 535                 540
197 Lys Asp Ile Thr Glu Phe Asp Phe Asn Phe Asp Gln Gln Thr Ser Gln
198 545                 550                 555                 560
199 Asn Ile Lys Asn Gln Leu Ala Glu Leu Asn Ala Thr Asn Ile Tyr Thr
200                 565                 570                 575
201 Val Leu Asp Lys Ile Lys Leu Asn Ala Lys Met Asn Ile Leu Ile Arg
202         580                 585                 590
203 Asp Lys Arg Phe His Tyr Asp Arg Asn Asn Ile Ala Val Gly Ala Asp
204         595                 600                 605
205 Glu Ser Val Val Lys Glu Ala His Arg Glu Val Ile Asn Ser Ser Thr
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```
206     610              615              620
207 Glu Gly Leu Leu Leu Asn Ile Asp Lys Asp Ile Arg Lys Ile Leu Ser
208 625              630              635              640
209 Gly Tyr Ile Val Glu Ile Glu Asp Thr Glu Gly Leu Lys Glu Val Ile
210              645              650              655
211 Asn Asp Arg Tyr Asp Met Leu Asn Ile Ser Ser Leu Arg Gln Asp Gly
212              660              665              670
213 Lys Thr Phe Ile Asp Phe Lys Lys Tyr Asn Asp Lys Leu Pro Leu Tyr
214              675              680              685
215 Ile Ser Asn Pro Asn Tyr Lys Val Asn Val Tyr Ala Val Thr Lys Glu
216              690              695              700
217 Asn Thr Ile Ile Asn Pro Ser Glu Asn Gly Asp Thr Ser Thr Asn Gly
218 705              710              715              720
219 Ile Lys Lys Ile Leu Ile Phe Ser Lys Lys Gly Tyr Glu Ile Gly
220              725              730              735
223 <210> SEQ ID NO: 3
224 <211> LENGTH: 735
225 <212> TYPE: PRT
226 <213> ORGANISM: Bacillus anthracis
228 <400> SEQUENCE: 3
229 Glu Val Lys Gln Glu Asn Arg Leu Leu Asn Glu Ser Glu Ser Ser Ser
230 1              5              10              15
231 Gln Gly Leu Leu Gly Tyr Tyr Phe Ser Asp Leu Asn Phe Gln Ala Pro
232              20              25              30
233 Met Val Val Thr Ser Ser Thr Thr Gly Asp Leu Ser Ile Pro Ser Ser
234              35              40              45
235 Glu Leu Glu Asn Ile Pro Ser Glu Asn Gln Tyr Phe Gln Ser Ala Ile
236              50              55              60
237 Trp Ser Gly Phe Ile Lys Val Lys Lys Ser Asp Glu Tyr Thr Phe Ala
238 65              70              75              80
239 Thr Ser Ala Asp Asn His Val Thr Met Trp Val Asp Asp Gln Glu Val
240              85              90              95
241 Ile Asn Lys Ala Ser Asn Ser Asn Lys Ile Arg Leu Glu Lys Gly Arg
242              100              105              110
243 Leu Tyr Gln Ile Lys Ile Gln Tyr Gln Arg Glu Asn Pro Thr Glu Lys
244              115              120              125
245 Gly Leu Asp Phe Lys Leu Tyr Trp Thr Asp Ser Gln Asn Lys Lys Glu
246              130              135              140
247 Val Ile Ser Ser Asp Asn Leu Gln Leu Pro Glu Leu Lys Gln Lys Ser
248 145              150              155              160
249 Ser Asn Ser Arg Lys Lys Arg Ser Thr Ser Ala Gly Pro Thr Val Pro
250              165              170              175
251 Asp Arg Asp Asn Asp Gly Ile Pro Asp Ser Leu Glu Val Glu Gly Tyr
252              180              185              190
253 Thr Val Asp Val Lys Asn Lys Arg Thr Phe Leu Ser Pro Trp Ile Ser
254              195              200              205
255 Asn Ile His Glu Lys Lys Gly Leu Thr Lys Tyr Lys Ser Ser Pro Glu
256              210              215              220
257 Lys Trp Ser Thr Ala Ser Asp Pro Tyr Ser Asp Phe Glu Lys Val Thr
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 05/20/2003
PATENT APPLICATION: US/09/848,909A   TIME: 17:26:38

Input Set : A:\00742.060002.SEQLIST.TXT
Output Set: N:\CRF4\05202003\I848909A.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:19; Xaa Pos. 397
Seq#:23; Xaa Pos. 427